

REMARKS

Favorable reconsideration of this application, in view of the present amendments and in light of the following discussion, is respectfully requested.

Claims 9-20 are pending. Claims 9, 12-14, 16 and 19-20 are amended. No new matter is introduced.

In the outstanding Office Action, Claims 12-13 and 19-20 were objected to under 37 C.F.R. § 1.75(c); Claim 9 was rejected under 35 U.S.C. § 102(b) as being anticipated by Feld et al. (U.S. Patent No. 6,281,755, hereafter “Feld”); Claims 10-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of Kaczynski (U.S. Patent Application Publication No. 2007/0111684, hereafter “Kaczynski”); Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of Shohara (U.S. Patent Application Publication No. 2005/0078743, hereafter “Shohara”); Claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of the Background; Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of the Background and Daners (U.S. Patent No. 6,229,393, hereafter “Daners”); Claims 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of the Background and Kaczynski; and Claims 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Feld in view of the Background and Shohara.

Initially, Applicants note that the Specification and Abstract are amended to remedy potential informalities.

In reply to the objection to Claims 12-13 and 19-20, Claims 12-13 and 19-20 are recast in independent form by this amendment. Therefore, it is respectfully requested that the objection to Claims 12-13 and 19-20 be withdrawn.

With respect to the rejection of Claim 9 as being anticipated by Feld, Claim 9 is amended to recite an amplifier that includes:

an amplification device;

an LC parallel resonant circuit connected in parallel to the amplification device; and

an LCR series resonant circuit *connected in parallel to the amplification device and the LC parallel resonant circuit.*
(Emphasis added.)

Turning to the applied reference, Feld describes a high-frequency power amplifier for feeding an antenna of a nuclear magnetic resonance tomography apparatus.¹ Feld illustrates that the high-frequency power amplifier includes an amplifier stage (2) to which a load G_L is connected, and an output matching network (8) connected in series therebetween.² Further, Feld illustrates that the output matching network (8) includes a parallel resonant circuit (20) connected in a parallel configuration with respect to the amplifier stage (2) and a series resonant circuit (22) connected in a series configuration between the parallel resonant circuit (20) and the load G_L .³

However, Feld does not describe that the series resonant circuit (22) is connected in parallel to the amplifier stage (2) and the parallel resonant circuit (20). Instead, Feld describes that the series resonant circuit is connected in series on the output side.⁴ Conversely, amended Claim 9 recites that the LCR series resonant circuit is connected in parallel to the amplification device and the LC parallel resonant circuit. Thus, Feld fails to disclose the claimed LCR series resonant circuit, and it is therefore submitted that amended Claim 9 is in condition for allowance. Accordingly, it is respectfully requested that the rejection of Claim 9 under 35 U.S.C. § 102(b) be withdrawn.

With regard to the rejection of Claim 14 as being unpatentable over Feld in view of the Background, Claim 14 is amended to recite an amplifier that includes:

¹ Feld at column 2, lines 55-60.

² Feld at column 5, lines 40-60; see also Figure 2.

³ Feld at column 6, lines 45-52; see also Figure 5.

⁴ Id.

an amplification device; and

a band-pass filter connected to an output terminal of the amplification device, the band-pass filter having a plurality of poles provided on a left side of an s-plane and a plurality of zeros arranged between the poles, *at least two zeros being arranged at locations other than an origin of the s-plane.*
(Emphasis added.)

As acknowledged by the outstanding Office Action, Feld does not describe an s-plane, much less the claimed plurality of poles and plurality of zeros.⁵ Further, the background art only describes a single zero located at the center of the s-plane.⁶ Thus, none of the applied art describes the claimed plurality of poles and plurality of zeros, recited in amended Claim 14, where at least two zeros are arranged *at locations other than the origin of the s-plane.*

As first recognized by the present inventor, the claimed plurality of poles and plurality of zeros provide numerous advantages to wide-band voltage amplification as described in the specification at, for example, paragraphs [0041]-[0045]. Thus, for the foregoing reasons, it is submitted that amended Claim 14 is in condition for allowance. Accordingly, it is respectfully requested that the rejection of amended Claim 14 under 35 U.S.C. § 103(a) be withdrawn.

As all other rejections of record rely upon Feld for describing the above-distinguished features, and the above-distinguished features are not disclosed or suggested by Feld, and are not disclosed or suggested alone or in combination with any other art of record, Applicants respectfully submit that a *prima facie* case of obviousness has not been presented. Accordingly, Applicants respectfully request that the rejection of Claims 10-13 and 15-20 under 35 U.S.C. § 103(a) be withdrawn.

⁵ See the outstanding Office Action at page 6, item 8.

⁶ See the specification at page 5, paragraph [0014].

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance for Claims 9-20 is earnestly solicited.

Respectfully submitted,


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